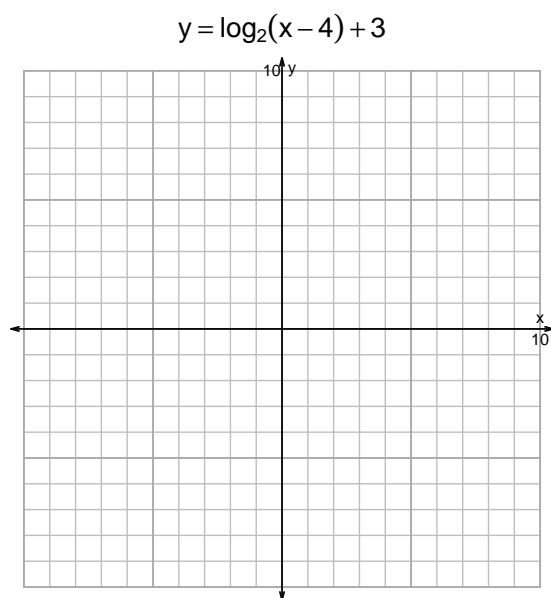
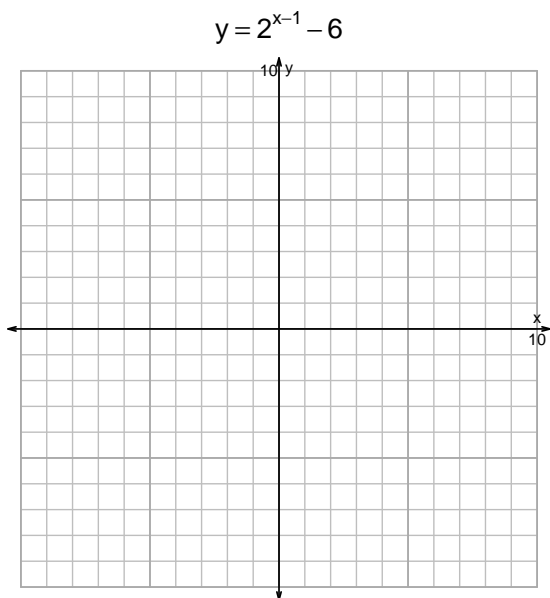


Name: _____

Date: _____

s18: EXP LOG (QUIZ v352)

1. (10 pts) Graph $y = 2^{x-1} - 6$ and $y = \log_2(x - 4) + 3$ on the grids below. Also, draw any asymptotes with dashed lines.

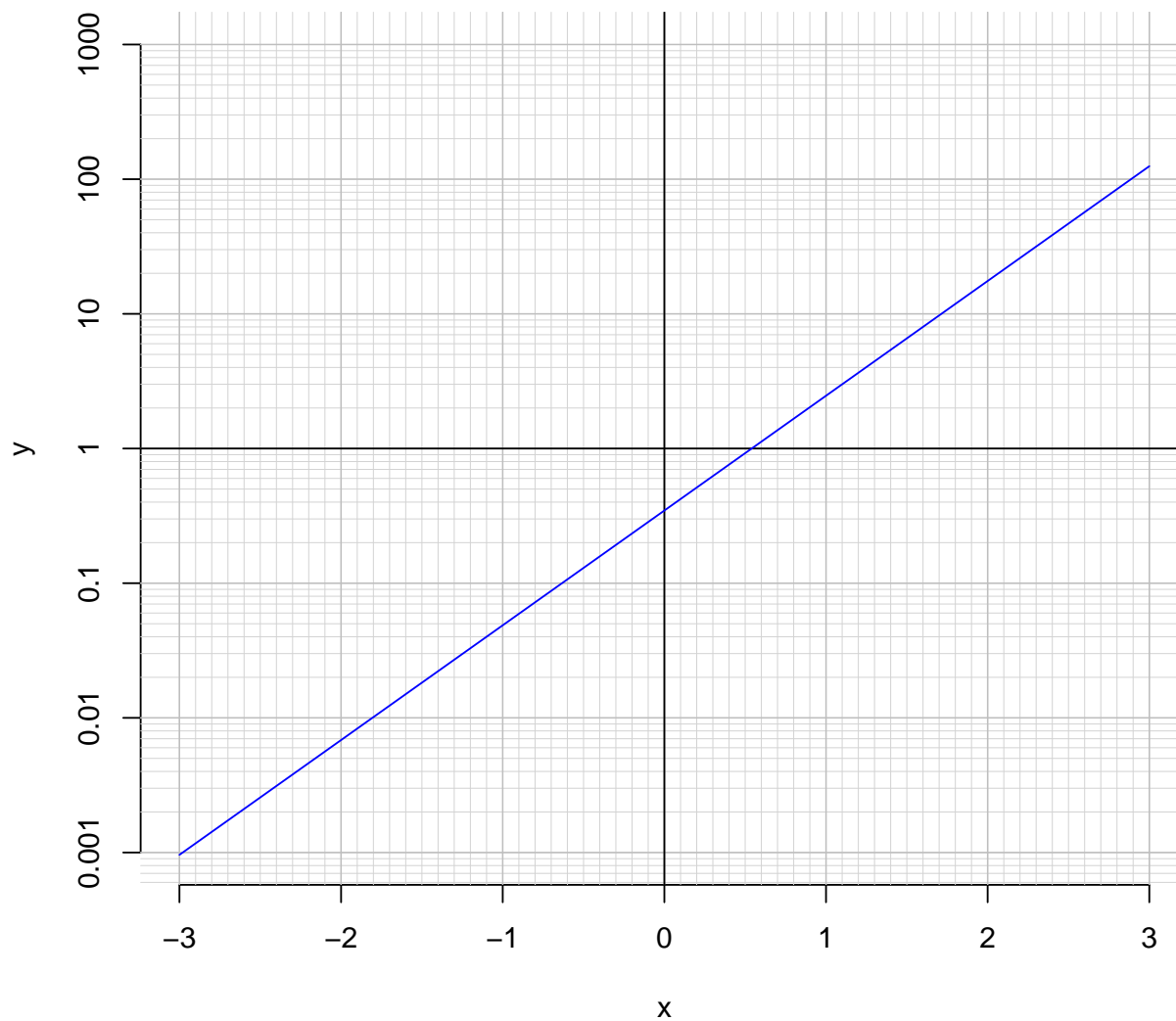


Somewhat useful hint: $2^3 = 8$, and thus $\log_2(8) = 3$.

2. (10 pts) Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression. Please do not do any arithmetic; just move numbers around.

$$-23 = \left(\frac{-7}{4}\right) \cdot 10^{-5t/3}$$

3. (10 pts) An exponential function $f(x) = 0.346 \cdot e^{1.96x}$ is graphed below on a semi-log plot.



- a. Using the plot above, evaluate $f(-1.1)$.

- b. The inverse function is logarithmic.

$$f^{-1}(x) = \frac{1}{1.96} \cdot \ln\left(\frac{x}{0.346}\right)$$

Using the plot above, evaluate $f^{-1}(8)$.